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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,637	03/07/2002	Lester David Michels	30895B/C1	1332

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ONE HEALTH PLAZA 104/3
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EXAMINER	
MADSEN, ROBERT A	

ART UNIT	PAPER NUMBER
1761	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/092,637	MICHELS ET AL.	
	Examiner	Art Unit	
	Robert Madsen	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Amendment filed September 29,2005 has been entered. Claims 1-15 remain pending in the application.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoi et al. (US 565895) in view of the admission of the prior art and Gans et al. (US 4025650) and Banwart and Furia.

4. See the Office Action mailed April 1,2005.

5. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoi et al. (US 565895) in view of the admission of the prior art and Gans et al. (US 4025650) and Banwart and Furia.

6. Currently amended claim 13 differs in scope from previously presented claim 13. Previously presented claim 13 recited a method directed to inhibiting the growth of *Aspergillus niger, Candida albicans, Enterobacter cloacae, Staphylococcus aureus, and lactobacillus delbruekii in an enteral complete feeding solution*, whereas currently amended claim 13 is now directed to inhibiting the bacteria and mold in the solution *to extend the life of an enteral feeding tube*.

7. With respect to the limitations of claims 13-15, except for the new purpose of the method: *to extend the life of an enteral feeding tube*, see the reasons stated in the rejections of claims 13-15 in the Office Action mailed April 1,2005 for

8. With respect to the extending the life of an enteral feeding tube, Aoi et al. teach the enteral complete feeding solution is part of a feed tube system (See Column 1, lines 9-15). Modified Aoi et al. prevents microbial growth in the solution for the reasons given in paragraph 20 of the Office Action mailed April 1, 20045, and thus modified Aoi et al. would also extend the life of an enteral feeding tube since there would be no microbial growth present in the solution as it passed through the tube.

Response to Arguments

9. Applicant's arguments filed September 29,20054 have been fully considered, but are not persuasive.

10. Regarding the arguments directed to the rejection of claims 1-9,11, and 12, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant is reminded that the primary reference, Aoi et al. , only differs from the independent claim 1 in that Aoi et al. teach the genus of p-hydroxybenzoic esters, salts of benzoic acid, and salts of sorbic acid as preservatives for a complete enteral nutritional solution that is

fed via a feed tube, but not the recited species of esters or recited concentrations of the salts and esters.

11. With respect to Gans et al., Applicant asserts that one of ordinary skill in the art would not look to Gans et al. for the motivation for selecting the specific preservative salts and esters (i.e. potassium sorbate, sodium benzoate, methyl paraben and propyl paraben) because Gans et al. do not teach a fat-containing solution for tube feeding, and there is no suggestion that the same preservatives would work in the fat-containing solution of Aoi et al. Applicant states: "Because of the hydrophobicity of the parabens, the skilled person would have expected that when added to a tube feeding composition containing fat, these agents would have accumulated in the lipid phase to the exclusion of the aqueous phase." There is no evidence on record to support this statement. Applicant is reminded that "[s]ubjective opinions are of little weight against contrary evidence" . In the instant case, the primary reference Aoi et al. provides that contrary evidence to Applicant's opinion: Aoi et al. teach p-hydrozybenzoic esters, commonly known as parabens, are preservatives for the fat-containing feed tube solution (column 4, lines 34-37 and 50-3).

12. Applicant further argues that Gans et al. teach the solution must have a necessary acid pH, which would limit its utility, whereas Applicant's invention is effective in a pH range of 3-8. Again, Applicant is reminded that the *primary* reference Aoi et al. provides evidence that the preservatives p-hydrozybenzoic esters, as well as salts of benzoic acid, and salts of sorbic acid, are utilized within the recited pH ranges of 3-8 in claim 2, 2-6.9 in claim 3, and greater than 5.5 in claim 4, since Aio et al. teach the

preservatives are for a solution of a pH of 5.5-7.0 (see column 5, lines 21-30 in light of column 4, lines 34-37 and 50-3).

13. Applicant believes that Gans et al. do not teach 0.4% preservatives or 0.12% sodium benzoate, 0.12% potassium sorbate, 0.12% methyl paraben and 0.05% of propyl paraben. However, as stated in the last two lines of paragraph 7 of the Office Action mailed April 1,2005, "See Table 1, which teaches 0.4% preservatives in light of the 15.5 lbs of total preservatives in Example 1". Table 1 shows 0.4 *parts by weight* preservatives for three different compositions in three columns, and one obtains 0.4 *percent by weight* preservatives by merely dividing the 0.4 parts preservatives by the total parts by weight for each composition (i.e. 0.390%, 0.395%(preferred formula) , and 0.386% for left, middle and right column respectively). The illustrative example given by Gans et al. (i.e. Example 1) teaches 15.5 lbs of preservatives consisting of 4.5 lbs sodium benzoate, 4.5 lbs potassium sorbate, 4.5 lbs methyl paraben and 2 lbs of propyl paraben. Multiplying the 0.4% preservatives taught for the three examples in Table 1 by the ratio of the weight of each preservative per the total preservative weight , one obtains 0.12% sodium benzoate, 0.12% potassium sorbate, 0.12% methyl paraben and 0.05% of propyl paraben, which are within the recited ranges.

14. With respect to Branwart, Applicant argues that the Examiner (or Branwart actually) states that potassium sorbate and sodium benzoate have a better solubility over sorbic and benzoic acid, there is no mention of this effects exits when the "sorbic and benzoic acids" are combined as in the present formulation. However, the present application's formulation is directed to the *salts of* , not the "sorbic and benzoic acids".

15. Applicant further argues that Branwart offers no proof or level of improvement that "sorbates in combination with benzoates are far more effective than either used alone". Applicant's attention is directed to the actual motivational statement in the rejection in the Office Action mailed April 1,2005 (i.e. item 3 in the continuation of paragraph 10 on page 3). The fact is Branwart offers proof or level of improvement in combining sorbates with benzoates: "Combinations of benzoate and sorbate are believed be more effective than either chemical used alone." See Page 393.

16. Applicant further argues that Branwart teaches the benzoate needs a low pH to be effective. Examiner notes that "low pH" is not limited to any particular value, and the primary reference teaches salts of benzoic acid may be used as preservatives at a pH values below neutral, which are low pH values.

17. With respect to Furia, Applicant argues that Furia does not teach the benzoic and sorbic acid are effective at a pH of 7. However, there would still be a motivation to combine the teaching of Furia with the primary reference Aoi et al., since Aoi et al. teach 5.5-7, preferably 6.0-6.5 (column 5, lines 22-30), and it is noted that this range is well within the recited pH ranges.

18. Regarding claims 13-15, Applicant argues that a prima facie case has not been established for the rejection under 35 USC 103(a) as being unpatentable over Gans in view of Aoi. The Examiner Agrees with this statement because claims 13-15 were actually rejected under 35 USC 103(a) as being unpatentable over Aoi et al. in view of the admission of the prior art and Gans et al. and Banwart and Furia for which a prima facie case of obviousness has been established.

19. Applicant is reminded that the primary reference, Aoi et al. , only differs from the independent claim 13 in that Aoi et al. teach a method of preserving an enteral complete solution genus of p-hydroxybenzoic esters, salts of benzoic acid, and salts of sorbic acid as preservatives for a complete nutritional solution, but not the recited species of esters or recited concentrations of the salts and esters.

20. Applicant refers to the Examiner's statement that Gans et al. " presumably would inhibit the growth of fungus, gram negative, or gram positive bacteria as recited since that is the purpose of preserving", and Applicant states there is no support for this assertion. However, this is not statement relied in the rejection. Applicant's attention is directed to the actual motivational statements for the combining the references provided in paragraph 19 and 20 on pages 8 and 9 for modifying Aoi et al. The primary reference teaches p-hydroxybenzoic esters, salts of benzoic acid, and salts of sorbic acid as "preservatives", which by definition inhibit microbial growth, in a complete enteral solution, he admission of the prior art teaches that enteral nutritional solutions are susceptible to microbial attack because of the proteins and starches. Gans et al. teach combination of 0.12% of both potassium sorbate and sodium benzoate, 0.05% propyl paraben and 0.12% methyl paraben will "preserve" (i.e. inhibit any microbial growth) in a solution comprising protein and starches. Branwart teaches benzoates are effective against yeast and molds, sorbates are effective against bacteria and mold, may not be effective at low sorbate/ high mold levels, and parabens are effective at higher pH levels, including neutral pH levels of Aoi et al., with the methyl to butyl esters being effective against Gram negative and Gram positive bacteria, as well as fungi,

wherein the effects of benzoates and sorbates in combination have a cumulative effect. Furia teaches benzoates and parabens have a cumulative effect. Thus, the art taken as a whole not only provides motivation for selecting the particular combination of p-hydroxybenzoic esters , salts of sorbic acid, and salts of benzoic acid to preserve the solution of Aoi et al. for the reasons stated in paragraph 19 and 20 of the Office Action mailed April 21,2005, but Branwart in particular provides expectation of success that the selected preservatives will inhibit the growth of *Aspergillus niger, Candida albicans, Enterobacter cloacae, Staphylococcus aureus, and lactobacillus delbruekii* because Branwart teaches methyl and propyl parabens are effective against gram negative bacteria (e.g. *Enterobacter cloacae*)and gram positive bacteria (e.g.*Candida albicans, Staphylococcus aureus, and lactobacillus delbruekii*) bacteria, benzoates are effective against yeast and molds (e.g. *Aspergillus niger)* , and sorbates are effective against bacteria and mold (e.g. *Aspergillus niger*).

Conclusion

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

22. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Madsen whose telephone number is (571) 272-1402. The examiner can normally be reached on 8:00AM-4:30PM M-F.

24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert Madsen
Examiner
Art Unit 1761

RAM

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